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ABSTRACT

A study at Carleton College (Minnesota) investigated: (1) the attitudes and values of incoming freshmen; (2) the extent of change in student collegiate styles over a period of 10 years; and (3) how students with different styles and orientations used college resources and organizations and pursued their education. The research was based on survey data obtained from over 90% of entering freshmen (N=5,125) during the period 1977-1989, surveys after 1 and 3 years of college, and student academic records. Six collegiate styles or orientations were identified: social-political activist, post-collegiate, libertarian, creative, recognized authority, and traditional academic. Analysis indicated that the student body had a wide variety of collegiate styles, with no single style dominating. Distribution of the different styles appears to have changed over time, and student behavior appears to be consistent within each style. Students with some styles showed significant change in attitudes during the college experience and some others showed little change during that period. Concerns about compartmentalization in college life and underuse of college resources are discussed. Includes nine references. (MSE)

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Freshman Values Versus College Experiences

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Carleton College

October 4, 1990

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ASSOCIATION FOR THE STUDY OF HIGHER EDUCATION

This paper was presented at the annual meeting of the Association for the Study of Higher Education held at the Red Lion-Jantzen Beach in Portland, Oregon, November 1-4, 1990. This paper was reviewed by ASHE and was judged to be of high quality and of interest to others concerned with the research of higher education. It has therefore been selected to be included in the ERIC collection of ASHE conference papers.

Who Were the Students of the 1980s? Writing in 1987, Nicholas Berry, a political scientist at Ursinus College, took issue with Ernest Boyer's College: The Undergraduate Experience in America (1987). In a letter reprinted in The Chronicle of Higher Education, Berry claimed that Boyer had been "far too soft on the current generation of college students." Berry was convinced that students had changed and changed for the worse.

> Year after year since the mid-1970s, those of us in higher education have faced the uncaring, the insipid, the drab. It is a travesty to call them students (The Chronicle of Higher Education, February 4, 1987, p. 37).

Rhetorical attacks on college students had become something of an intercollegiate sport in 1987, and while Berry may have distinguished himself with his stinging tone, his thesis was far from novel. In fact, less vitriolic but no less anxiety-ridden interpretations of student life had become the norm in 1987. Besides Boyer's book, widely read and influential books by Alexander Astin, Allan Bloom and Helen Horowitz were all published that same year. The displeasure with contemporary students was widespread and not restricted to the op-ed pages of local newspapers. By 1987 a variety of scholars of higher education—sociologists, psychologists, historians and anthropologists—had provided one kind of empirical support or another for the charges of student consumerism, careerism, non-intellectualism, status-seeking and fatalism about civic problems cited in Berry's letter.

Arthur Levine set the interpretive mood in 1980 with the publication of When Dreams and Heroes Died: A Portrait of Today's College Student. Relying heavily on survey research, Levine argued that college students reflected the times, and that the United States was experiencing a period of "individual [rather than community] ascendancy." During such periods students, like adults, generally "...tend to be more present-oriented, more hedonistic than ascetic, more concerned with rights than responsibilities, more interested in duty to one's self than to others, and more dedicated to the propriety of taking rather than giving" (Levine, 1980, p. 119). Levine was quick to emphasize that he was writing about "newly emerging trends—not universal practices or even majority behavior" (1980,p. 4). But to readers who wistfully remembered the idealistic, socially conscious, intellectual students of the 1960s, Levine's "newly emerging trends" must have been somewhat disquieting. What he intimated but never said was that the character of these post-sixties students was indifferent, if not hostile, to the time-honored purposes of higher education. Using a long list of unflattering adjectives, Levine characterized the new breed as "self-concerned and me-oriented; nonideological; disenchanted with politics; weak in basic

skills; career-oriented; competitive; pessimistic about the future of their country; and interested in material success" (1980, p. 131).

By 1987 the gist of Levine's thesis had gained wide acceptance and was not seriously questioned by scholars of the American campus. Helen Horowitz noted that the "new outsiders," as she called them, were often vocationalists without a calling, prematurely committed to "a career without content" (1987, p. 273). Astin suggested that his twenty-year freshman survey data revealed "significant and complex changes in student attitudes and values." At the top of his list was the conclusion that the students of the eighties showed "greater interest in material and power goals, coupled with decreased social concern and altruism" (Astin, Green and Korn, 1987, p. 26). One implication was clear. Burton Clark and Martin Trow's long-used and useful typology of students did not seem to adequately accommodate the students of the eighties. Whoever they were and whatever they believed and valued, they did not seem to be the collegiates, the vocationalists, the academics, or the nonconformists of the recent past.

Even more unsettling was the implication that these students, hardened by a false precocity, were impervious to the power of higher education even as they arrived as first year students. Whereas many students in the past had viewed college as an opportunity to seek their identities by exploring a wide range of ideas and values, the students of the eighties, so we were told, viewed their experience in narrow, instrumental terms. The inescapable conclusion seemed to be that the students of the eighties were calculating credentialists, who were intent on using their colleges as four year resume-building camps between high school and a real job in the real world. In Horowitz's words: "They insist that college not change their goals, perspectives, or style of life" (1987, p. 67). The fact that they were also surprisingly "nice," to use Bloom's word, was quite obviously of little consolation to the Nicholas Berrys of the professoriate.

But what was clear and indisputable in 1987 has been called into question during the past two years. After living among undergraduates for one hundred thirty days, Michael Moffatt, an anthropologist, had a somewhat different story to tell in Coming of Age in New Jersey: College and American Culture (1989). He acknowledged that the Rutgers University classrooms were not especially congenial places for the intellect: "The learning was often passive and mechanistic; the teaching, indifferent..." (1989, p. 274). But he vigorously disputed the thesis that students were uninterested in the intellectual challenges and satisfactions that college had to offer. Robert Pace's The Undergraduates (1990) provided detailed corroboration of

Moffatt's observations. Relying on the 25,427 undergraduate responses to his College Student Experiences Questionnaire, Pace reported that the majority of college students between 1983 and 1986 had made "substantial progress" toward the intellectual goals of higher education. In his words:

> Reading what some critics of higher education have said, one would suppose that most students today make very little progress toward these important goals. However, the truth is exactly the opposite (1990, p. 56).

Moffatt and Pace viewed the "calculating credentialists" thesis with skepticism, suggesting that it was an alarmist overreaction to changes in student style, rather than a generational rejection of the higher purposes of higher learning. Richard Light added credence to this rebuttal with his first report on the Harvard Assessment Seminars (1987-1990). Light surveyed graduates of the classes of 1957, 1967, and 1977 and found that their appraisals of the quality of their academic experiences differed very little from those of current students (1990, p. 24). As the decade closed, the revisionists seemed to have the last word, arguing that the students of the eighties, whatever their faults and excesses, were no less engaged in the adventure of higher education than their immediate predecessors.

Our Questions:

The simplest expressions of our questions are: What are we to make of these contrasting interpretations of American students of the 1980s? In what ways had these changes in student attitudes, values and behavior—real and imagined, substantive and stylistic, enduring and ephemeral—made themselves manifest at Carleton College during recent years? Our initial impression was that Horowitz's "new outsiders" had unquestionably arrived. But did they, as she claimed, "dominate the campus of the 1980s, setting the terms of undergraduate discourse" (1987, p. 273)? At the same time, we found ourselves impressed with the social, cultural, intellectual and political vitality of students on campus. But was this merely the visible energy of a small and exceptional cadre of student leaders? We developed three research strategies in our attempt to answer these questions.

First, we wanted to learn something about the diversity of attitude and value orientations of incoming students. Specifically, we asked: Do students arrive at Carleton with distinctive attitudinal and value orientations as expressed on Astin's survey of goals, reasons for coming to college, and views on social and political issues. We were looking for an input measure, some way of confirming or disproving the presence of the kind of student described by Levine, Horowitz, Astin, and Bloom. But we were equally interested in the belief and value systems of other incoming students.

We were suspicious of the amount of attention focused on the "calculating credentialists," or the "post-collegiates," as we came to call them, and we wanted to find out more about who the other students of the eighties were.

Second, we wanted to learn about the extent to which these collegiate styles changed during the decade. We determined to compare the results of several freshman surveys to see if any of the orientations became significantly more salient or less salient over the course of the decade.

Third, we wanted an output measure, some indication of how students with differing styles and orientations used the college, spent their time, pursued their educations. To do this we matched student responses to the freshman survey with their subsequent responses to Pace's College Student Experiences Questionnaire.

Of course, the outcome of a study like this should not be reported without offering some kind of description of the setting in which it has been conducted. For this purpose, a brief introduction to Carleton College has been prepared. The reader who is unfamiliar with the college can find that information in Appendix A. There can be little doubt that the kinds of effects we have found will be larger or smaller in other educational settings. While we do not dwell on such possibilities in this report, our brief description of Carleton is intended to assist any one who may wish to think about those some of those possibilities.

Method and Results

Three analyses were conducted in this study. First, survey data from entering freshmen were subjected to a factor analysis in order to identify underlying dimensions representing basic, college-related stylistic themes or orientations of freshmen at the time of college entry. In this case, the data are from the survey sponsored annually by the Higher Education Research Institute of UCLA and the American Council on Education. The data obtained from over 90% of entering Carleton College freshmen for the years 1977 through 1989 formed the basis for this research. The freshmen surveys were not identical over these years, but 30 questions which inquired about reasons for going to college, personal goals, and views on social and political issues were common to those 12 years. Those items were used for the factor analysis.

Second, by means of regression studies, the relations between factor scores for the collegiate style dimensions and measures of student activity in college were examined. For this purpose, the survey data of College Freshmen were matched on a case-by-case basis with "quality of effort"

scores from 14 scales on the Student Experiences Questionnaire (Pace, 1983) which were obtained during the freshmen and junior years of college.

The focus of the quality of effort scales is on the manner in which students use the major resources and opportunities for learning and personal growth which most colleges provide. The scales are constructed as sets of items which inquire about student use of facilities such as libraries or classrooms and other sets of items which ask about experiences with faculty, campus organizations, or other students. As measures of student activity, the scales account for the amount, scope, and quality, of student effort in using college facilities and opportunities. In that regard, they serve as appropriate measures by which to examine the relationship between the styles (purposes, views and goals) which students bring to college and the way they make use of facilities and opportunities during their stay.

The quality of effort scores used in our analyses were obtained through surveys conducted after one year of college and again after three years of college. Thus, the relations between quality of effort scores and collegiate styles, as identified at the beginning of the freshman year, could be examined after two time intervals. These measurements at different times allow for the examination of possible effects related to college style which may be either short term or enduring. Furthermore, the reasons for change occurring from one time to the next in relations between college styles and activities should be considered. While some changes undoubtedly come about through developmental processes, others may result directly from three years of college experience.

Finally, by examining electronic transcript records, relations between grade point average and persistence to graduation were related to collegiate styles. Also included in these analyses were variables from the student experiences scale. From the work of Pace (1984), we know already that quality of effort is strongly related to the views that students have about their achievement in college. In fact, his work leads to the conclusion that what students do once they get to college is more important than any of the other background variables that researchers have examined. This portion of the study looks beyond most other kinds of background variables, and considers the possible relations between college style or orientation and college success.

Identification of College Styles: Factor Analysis Results

The first set of results, based upon the analysis of survey responses of 5,125 entering freshmen indicates the existence of six underlying dimensions for the 30 survey

items. While the rotated solution to the factor analysis solution appears in Appendix A, the dimensions and a description of each, based on the items with the highest factor loadings, follow immediately.

1. Social-political activist: This factor is characterized by an interest in influencing social values, participating in community action, promoting racial understanding, influencing the political structure, and helping others in difficulty.

2. Post-Collegiate: The items which emerge to make up this factor are focused on events and accomplishments expected to occur in the years beyond college. On this dimension the interest is in making more money, being well off financially, getting a better job, being successful in one's own business, and having administrative responsibility.

3. Libertarian: This dimension has positive high factor loadings for liberal positions on social and legal matters which have been the focus of considerable attention for many years in our society: the view that abortion should be legal, that it is okay for couples to live together before marriage, and that marijuana should be a legal drug. In the other direction (the factor loading is negative), this dimension includes opposition to the view that homosexual relations should be prohibited.

4. Creative: Intentions of making creative contributions in art, literature, and the performing arts define the goals which make up this factor.

5. Recognized authority: The desire to be an authority in one's own field and to obtain recognition from colleagues are goals which distinguish this dimension.

6. Traditional academic: Traditional purposes in attending college are expressed within this dimension. Those purposes include becoming a more cultured person, gaining a general education, learning more about things, and improving reading and study skills. For the most part, these purposes fit well with the mission of the traditional liberal arts college and the educational values of its faculty.

In order to examine the period of time covered by this

analysis for changes, mean factor scores for each dimensions are plotted for each of the 12 entering classes. For purposes of simplification and clarity the six sets of factor scores are plotted in pairs in three separate figures.

The results for the orientations we have labeled the post-collegiate and traditional academic are shown in Figure 1. These results suggest that change has occurred over the last 12 years. The mean factor scores for the traditional academic dimension during the last three years of the period are higher than the means for the first three for a net change in position during this period. While that kind of change is consistent with the observation that admissions to Carleton have become more selective during this period, and it seems quite reasonable to expect that more selective admissions would lead to increases in the numbers of students having an orientation toward traditional educational values, the analysis of variance found no statistically significant difference.[1]

Also of interest in Figure 1 is the pattern shown by the post-collegiate means. In this case, the index reaches its highest level in the middle of the period, and drops to lower levels in the latter part of the 1980s. This change may be an indication that this style is on the decline at Carleton, and that we will find less concern about future vocations and earnings among students in the 1990s. Paired comparisons yielded a significant difference between means for the years 1984 and 1986.

Figure 2 presents means for the recognized authority and creative styles factors. Both of those factors show declining average scores over the period, although there is considerable variability between years. The decline on the recognized authority dimension may be very important. Our discussion returns to this observation in conjunction with findings concerning the relations between college styles and utilization of college facilities and opportunities. The difference between means for 1979 and 1989 is statistically significant for recognized authority.

The change over time for the creative dimension is much roughly parallel to that of the recognized authority. In this case also, the change is real. The mean for 1989 is statistically different from those of 1978 and 1979.

Social and political activist and libertarian orientations are shown in Figure 3. While the activists

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[1] F statistics were obtained using a one-way analysis variance design. A statistically significant F was followed by post-hoc comparisons employing Scheffe's procedure.

show considerable variation over that period, no special pattern of change is clear, even though the year 1988 differs significantly from 1979, 1981 and 1986. On the other hand, the libertarian means are increasing over the final five years of the period, such that the mean for the year 1989 is significantly different from the means for 1981 and 1980.

Relations Between Freshmen Styles and Freshmen College Experience

Our examination of the relationship between the six college styles of new students and the utilization of college resources by first year Carleton students was conducted through a series of regression procedures. Each of the six sets of factor scores was used as a dependent variable in a stepwise regression procedure which included the 14 quality of effort scores (QE scores) from the student experience questionnaire.

The factor scores for this set of regression runs are from the freshmen who were surveyed in the fall of 1983, 1985, 1987, and 1989, and from the student experience quality of effort scores which were obtained in the administration of that survey during the spring of 1984, 1986, 1988, and 1990. The response rates for the freshman survey for those years were over 90%, while the response rates for the Student Experience Questionnaire among freshmen were lower and varied more widely, from 53% to 69% by year.

The results which appear in Table 1 indicate that each of the six student styles relates to a characteristic set of variables representing the scope, amount, and quality, of effort in the utilization of college facilities and opportunities.

Factors scores for the social and political activist dimension, for example, are related positively to scores on the topics of conversation scale, and to the utilization of opportunities on the clubs and organizations scale. On the other hand, experience in the domain of science and technology is related negatively to the social and political dimension. In general, these results indicate the presence of small but statistically significant relationships between these variables and a social and political activist style. Students whose factor scores are high for this college style can be can be expected to talk with other students more often about more sophisticated topics, and furthermore, they can be expected to be more deeply involved in campus organizations for student government, publications, and social activities.

The strongest set of effects, in terms of accounting

for variance, is seen for factor scores on the creative dimension, where higher scores are accompanied by greater use of art, music and theatre facilities. In addition, experience in the science and technology domain and in clubs and organizations is of a lower order for students who rank high on the creative dimension. Finally, these students are more likely to have a higher level of experience in their writing activities. This set of student experience variables account for almost 17% of the variance in factor scores for the creative orientation.

To look at the results in Table 1 in another way, consider that the scores on the science and technology scale are associated positively with scores on the libertarian and recognized authority[2] dimensions but negatively with scores on the social and political activist and creative dimensions. For the traditional academic, there in no statistically significant relation. The conclusion, overall, is that there are real differences in the kinds of experiences students with different orientations have in science and technology as first year students at Carleton College.

Another salient part of a traditional liberal arts education is experience in the arts, which is represented in a quality of effort scale encompassing activities in art, music, and theatre. In this analysis, higher quality of effort scores are associated with high factor scores on the creative, libertarian, and traditional academic dimensions. The negative effect on this scale for the post-collegiate suggests that education for these students consists of comparatively less experience in the arts than is the case for many other students, at least during the first year.

Additional details in these observations are of special interest to the faculty and administrators who manage the educational resources of Carleton College and to those who select students for each new class. But for purposes of this report, the conclusion is that much of the quality, scope and amount, of experience that students have with facilities and opportunities provided by the college is related to the orientation or style of the students enrolled at the institution.

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[2] Because of the generally recognized decline in interest in the science areas among American college students, it should noted that the recognized authority, while associated positively with the science and technology QE score, is on the decline among freshmen at Carleton. This relationship may be worth examining more broadly, in that the decline of interest in science may be related to a decline in the presence of this particular goal orientation among college students in recent years.

Table 1. Regression Results with QE Scores after One Year

Dependent Variable: Social/Political Activist

	Coefficient	T	P<
Intercept	-1.203642	-6.203	.0001
Information in conversations	.062132	5.126	.0001
Clubs and organizations	.028760	4.323	.0001
Science and technology	-.014781	-2.951	.0033

Adj. R^2=.10669 N=596 F= 24.7 p<.0001

Dependent Variable: Post-Collegiate

	Coefficient	T	P<
Intercept	-.228752	-1.017	.3095
Art, music and theatre	-.034123	-5.278	.0001
Student union	.023380	3.200	.0015
Conversation topics	.016392	2.475	.0136

Adj. R^2=.05214 N=594 F= 11.9 p<.0001

Dependent variable: Libertarian

	Coefficient	T	P<
Intercept	-.066382	-.289	.7724
Athletic/recreation facilities	-.012685	-2.582	.0101
Library experience	.021297	2.760	.0060
Science/technology	.013946	-2.898	.0039
Art, music and theatre	.013830	2.372	.0180
Experience in writing	-.017959	-2.579	.0102
Information in conversations	.026532	2.212	.0273

Adj. R^2=.06639 N=591 F= 8.1 p<.0001

Dependent Variable: Creative

	Coefficient	T	P<
Intercept	-.742725	-3.750	.0002
Art, music and theatre	.048748	8.857	.0001
Science/technology	-.024749	-5.523	.0001
Clubs and organizations	-.019834	-3.272	.0011
Experience in writing	.015210	2.492	.0130

Adj. R^2=.16815 N=591 F=31.1 p<.0001

Dependent variable: Recognized Authority

	Coefficient	T	P<
Intercept	-1.107653	-6.414	.0001
Experiences with faculty	.035048	4.496	.0001
Science/technology	.019435	3.877	.0001

Adj. R^2=.06202 N=595 F=20.7 p<.0001

Dependent Variable: Traditional academic

	Coefficient	T	P<
Intercept	-1.190342	-6.321	.0001
Personal experience	.017704	2.976	.0030
Art, music and theatre	.015233	2.990	.0029
Course learning	.017500	2.788	.0055

Adj. R^2=.07356 N=594 F= 16.8 p<.0001

Relations Between Freshmen Styles and College Experience in the Third Year

By the time students have reached the end of the third year of college, the influence of the institution and its educational process may have erased many of the effects associated with particular collegiate styles. The regression results in Table 2 afford the opportunity to consider some of these possibilities.[3]

The social and political activists still distinguish themselves in the quality of experience they have in campus organizations. However, they can also be characterized by the quality of effort in their use of the student union and in their level of activity in the arts. The association of the organizations and student union scales with this college style seem appropriate enough, considering that many of the organizations at Carleton have offices or other facilities in the student center. Lacking strong competing hypotheses, one might assert that the presence of the arts scale in these results could be one of the successful outcomes of the educational process, for which the college might take credit. Questions like this can be examined further in the future.

For students completing three years at Carleton who had high scores on the post-collegiate dimension, positive relations are shown for organizations, athletic and recreational facilities, student acquaintances and student union QE scales. The dimensions running in the other direction are the arts, information in conversations, and personal experience. Overall, this set of QE scores accounts for over 18% of the variance among post-collegiate scale scores. It is of some interest to note that while these student have lots of contact with other students who vary in terms of background, race, personal philosophy, and values, they are less likely to worry about personal issues or interpersonal relationships, and the scope and quality of the topics they discuss are also of a lower order, by Carleton standards. Overall, this set of findings suggests some areas in which the attention of the educational process might be focused. Education in the arts, for the post-collegiate group, should be thought of in this regard.

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[3] The response rates for the Student Experience Questionnaire varied between 56% and 46% by year among members of the junior class. Certainly, the opportunity for biases that cannot be controlled statistically, is present with response rates this low, our examination of variables such as GPA, major, and SAT scores, showed no obvious sources of bias.

One consistent finding in all of the applications of the Student Experiences Questionnaire at Carleton is that the college ranks relatively high on the athletics and recreation QE scale when compared to the norms for other institutions.[4] Given that observation, it is somewhat surprising to find the presence of two college styles which correlate negatively with athletics and recreational facilities. The libertarian and the traditional academic dimensions have that relationship to athletics. One hypothesis that might be examined further is that exceptionally high QE scores in the broader student population, produce this effect for students whose style encompasses relatively less, but otherwise adequate, athletic and recreational activity. Should this hypothesis prove false, the faculty and administrators may wish to consider ways to make these resources more attractive to students who sit on the upper portions of the libertarian and traditional academic dimensions. This line of reasoning demonstrates that this kind of analysis has diagnostic potential and may lead to recommendations for adjusting the fit between student styles and college opportunities.

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[4] Pace reports norms for doctoral granting universities, comprehensive colleges and universities, general liberal arts colleges and selective liberal arts colleges (1987).

Table 2. Regression Results with QE Scores after Three Years

Dependent Variable: Social/Political Activist

	Coefficient	T	P<
Intercept	-1.614894	-5.746	.0001
Clubs and organizations	.022093	2.668	.0081
Student union	.022657	2.240	.0260
Art, music and theatre	.018951	2.204	.0285

Adj. R^2=.11516 N=242 F= 11.6 p<.0001

Dependent Variable: Post-Collegiate

	Coefficient	T	P<
Intercept	-.079612	- .221	.8252
Art, music and theatre	-.033015	-3.682	.0003
Clubs and organizations	.030814	3.511	.0005
Athletic/recreation facilities	.017839	2.317	.0213
Information in conversations	-.071110	-3.415	.0008
Friends	.030588	2.871	.0045
Student union	.026986	2.554	.0113
Personal experiences	-.028780	-2.482	.0137

Adj. R^2=.18451 N=237 F= 8.9 p<.0001

Dependent Variable: Libertarian

	Coefficient	T	P<
Intercept	.625594	3.155	.0018
Science/technology	-.016988	-2.874	.0044
Athletic/recreation facilities	-.017762	-2.414	.0165

Adj. R^2=.05250 N=243 F= 7.8 p<.0005

Dependent Variable: Creative

	Coefficient	T	P<
Intercept	-.453145	-1.674	.0955
Art, music and theatre	.059398	7.865	.0001
Dormitory experience	-.025878	-2.922	.0038
Conversation topics	-.017229	-2.010	.0456

Adj. R^2=.20902 N=242 F= 22.5 p<.0001

Dependent Variable: Authority

	Coefficient	T	P<
Intercept	-1.026821	-4.107	.0001
Clubs and organizations	.026518	3.398	.0008
Science/technology	.018764	3.024	.0026

Adj. R^2=.06480 N=242 F= 9.5 p<.0001

Dependent Variable: Traditional academic

	Coefficient	T	P<
Intercept	-.661022	-2.216	.0276
Course learning	.041335	4.316	.0001
Athletic/recreation facilities	-.022740	-3.712	.0003

Adj. R^2=.09272 N=243 F= 13.5 p<.0001

Success in college is another area of fairly obvious interest for the exploration of differences across college styles. The results in Table 3 show career grade point average[5] as the dependent variable in a stepwise regression procedure which permited the entry of the following variables: 14 quality of effort scores, 8 assessment indexes concerned with perceptions of the college environment, and 21 student estimates of gains they made toward particular goals. Certainly, the things students do, even as early as the freshman year, along with personal perceptions of their surroundings and progress toward important goals, can be expected to relate to academic success. The question here is whether college style or orientation variables can contribute to predictions of academic success. For these purposes academic success is defined in two ways: grade point average and college persistence.

As seen in Table 3, the post-collegiate orientation is among the freshmen year variables which relate to grade point average. That relation is negative, and it comes as one of three variables with effects in that direction. Interestingly, one of the other effects involves a perception of the college environment as emphasizing vocational development; attributing this quality to the college environment relates to lower grade point averages. Similarly, a perceived gain in the ability to work as a team member relates negatively to grades. Working as a team member may also be more a part of a vocational orientation than an academic one.

In the other direction, course learning relates positively to grade point average, as do gaining a background for further education and gaining knowledge and skills applicable to a specific job or type of work. In the case of the perceived gains, experience in classes related to planned majors and graduate or professional programs may be what freshmen had in mind as their progress.

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[5] Career grade point average refers to the latest gpa available for any student without regard for the number of terms completed. For some only three terms of work are complete, for others all college work is complete.

Table 3. Regression Results for College Success: College Styles and SE Variables after One Year

Dependent Variable: GPA

	Coefficient	T	P<
Intercept	2.862343	25.348	.0001
Gain: background for further education in prof or field	.074229	3.779	.0002
Environ: Emphasis on development of vocational competence	-.048402	-4.122	.0001
Post-Collegiate	-.072596	-3.768	.0002
QE: Course learning	.013805	3.883	.0001
Gain: ability to function as a team member	-.077534	-3.835	.0001
Gain: work related skills	.061434	2.249	.0249

Adj. R^2=.11840 N=586 F= 14.3 p<.0001

To continue our examination of relations between college orientation and college achievment, we looked at the college experience survey results obtained in the third year of college. The results, shown in Table 4, again have career grade point average as the dependent variable (between 9 and 12 terms had been completed). In this case, our questions concern the kinds of effort, perceptions, and perceived progress, which relate to success among more experienced and mature college students. When compared with the freshmen results, we fully expect that the perceptions and behavior of third-year students will relate differently to college success. In addition we ask whether, for more experienced college students, any of the early college orientations we have identified belong on our list of the correlates of grade point average?[6]

As the results in Table 4 indicate, two college styles relate positively to the grade point averages of students nearing their final year of college. Both libertarian and social and political activist orientations correlate positively with grades. From the results we have obtained so far there is no easy interpretation to go with these observations, but clearly high scores on these dimensions as freshmen are related to higher grades later in college.

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[6] This group differs from the freshman group in several ways, and in particular it should be noted that approximately 15% of the original cohorts have withdrawn from school by this time.

Table 4. Regression Results for College Success: College Styles and SE Variables after Three Years

Dependent Variable: GPA

	Coefficient	T	P<
Intercept	2.931145	24.262	.0001
Libertarian	.089590	3.393	.0008
Gain: Understand new sci/tech developments	.056291	2.695	.0075
Activist	.068746	2.686	.0077
Environ: relations with other students(friendly,supportive)	.050089	2.731	.0067
Gain: ability to function as a team member	-.070941	-2.646	.0086
Gain: work related skills	.065782	2.264	.0244

Adj. R^2=.11635 N=278 F= 33.4 p<.0001

Persistence in college is another kind of measure for success in college which is of special interest in our study of variables which relate to college orientation. For these purposes, it is important to note that at Carleton each entering cohort of students has a withdrawal rate which is less than 5% per year, such that over 80% actually graduate. In our examination of student experience variables and college orientations which relate to persistence, we used persistence as a dummy variable (1 for persistence, 0 for withdrawal). While the student experiences results were taken from questionnaires completed by freshmen, the withdrawal (or persistence) observations covered the entire span of enrollment at Carleton (3 to 12 terms).[7]

The principle finding shown in Table 5 is that the creative and the libertarian college orientations both relate to persistence. However, both of those relations are negative. On the positive side, the quality of effort score for course learning and the personally estimated gain in writing are contributors to an increased likelihood of persistence.

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[7] An analysis for persistence using junior year data was not conducted because after the spring term of the junior year few students withdraw. That is, the event to be predicted would be a rare one, and the results would be likely to be misleading.

Table 5. Regression Results for College Persistence: College Styles and Student Experience Variables after One Year

Dependent Variable: Persistence

	Coefficient	T	P<
Intercept	.017727	.112	.9106
Gain: computer familiarity	-.093950	-4.438	.0001
Course learning	.016257	3.642	.0003
Gain: effective, clear writing	.069897	2.771	.0058
Creative	-.056433	-2.199	.0283
Environ: relevance and practical value of courses	-.043063	-2.708	.0070
Environ: relations with faculty (e.g., helpful)	.061221	2.901	.0039
Libertarian	-.057715	-2.231	.0261
Gain: awareness of different cultures, philosophies	-.055294	-2.157	.0314

Adj. R^2=.08882 N=585 F= 8.2 p<.0001

CONCLUSION

Writing in 1988, Frances Stage urged so-called student development researchers to make greater and more imaginative efforts to uncover relationships between psychosocial variables and outcome variables. She described the problem and challenge in the following way:

> Most outcomes research treats students as if they belonged to just a few large groups (male and female, minority and majority, or traditional and older), whose members respond in similar ways to the environment. The psychosocial variations among students which may cause them to respond differently to the same experiences and environmental influences are not as readily determined. In studying the outcomes of college, researchers are not making full use of the knowledge of the importance of student;ent typologies ((1988, p. 249).

Whatever we did or did not learn about the Carleton students of the 1980s, we have learned that we are in general agreement with Stage on this point. We have found it extremely useful and interesting to use the entering student data from the Astin surveys to identify the various ways in which students identify themselves during their first week of college. Stage distinguished among three groups of students on the basis of their motivation for attending college: certification, cognition and community service. There are some similarities between her approach and our own, but we have tried to capture a broader set of incoming values and beliefs having to do not only with reasons for coming to college, but also personal goals and social and political views.

One of our conclusions is that the Carleton student body was not dominated by any one collegiate style during the 1980s. We found evidence for a wide variety of collegiate styles throughout the decade. The Carleton student body is certainly not dominated by the post-collegiates, though their presence does provide some support for the "calculating credentialist" thesis mentioned in the introduction.

As interesting as the diversity in collegiate styles is the amount of change over time shown by several of those styles. The post-collegiate, for example, appear to be on the decline, while the libertarian orientation is rising. Both the recognized authority and creative styles have declined gradually over this period. Whether these changes can be attributed to variables in the admissions process, to the volatility of adolescent social attitudes and values or other societal influences, we do not know. However, what we do know is that these styles have important implications for how students use their college (the amount, scope and

quality of effort which they invest in facilities and opportunities).

We conclude that students not only have a variety of discernable styles, but act in accordance with those styles in predictable and sometimes puzzling ways. For example, it is not at all surprising that among first year students the creative style relates strongly to the art, music and theatre quality of effort scale. Nor is it surprising that the recognized authority style relates to experience with faculty and high levels of activity in science and technology areas for first year student. More puzzling is the question of why first year libertarians have such low quality of effort scores in athletics and in writing. Clearly, as in the case of the libertarian, we have a lot to learn about why first year students find certain facilities and opportunities unappealing.

We conclude also that the change and, in some instances lack of change, through the third year of college provides observations holding important implications for purpose of mission of a liberal arts education. We were not surprised to find that relations between styles and quality of effort scores did not change in some cases. Some of the lack of change can be interpreted as stagnancy, and is therefore unsettling. For example, the relation between post-collegiate and quality of effort in the arts remains unchanged into the third year, and even more troubling is the observation that for libertarians experience in science and technology goes from positive in the first year to negative in the third. On the other hand, the social and political activists develop a positive relation with experience in the arts by the third year of college.

These observations lead us to raise the issue of compartmentalization in student life. This is one of the strong strands in the literature on undergraduates during the 1980s. Both the detractors and defenders of today's undergraduates have expressed concern about early and enduring student foreclosure of learning opportunities. We have already noted some evidence of this disturbing phenomenon, as in the case of the experience of the post-collegiate with the arts. However, in our estimation this problem is not of the magnitude that we have been led to expect by some of the more pessimistic reports. While our findings are reassuring for Carleton College, the issue of premature career decisions and underutilization of college resources remains a concern for all institutions of higher education, especially liberal arts colleges with a historical commitment to the ideal of intellectual well-roundedness.

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FIGURE 1. POST-COLLEGIATE AND TRADITIONAL ACADEMIC STYLES OVER TWELVE YEARS

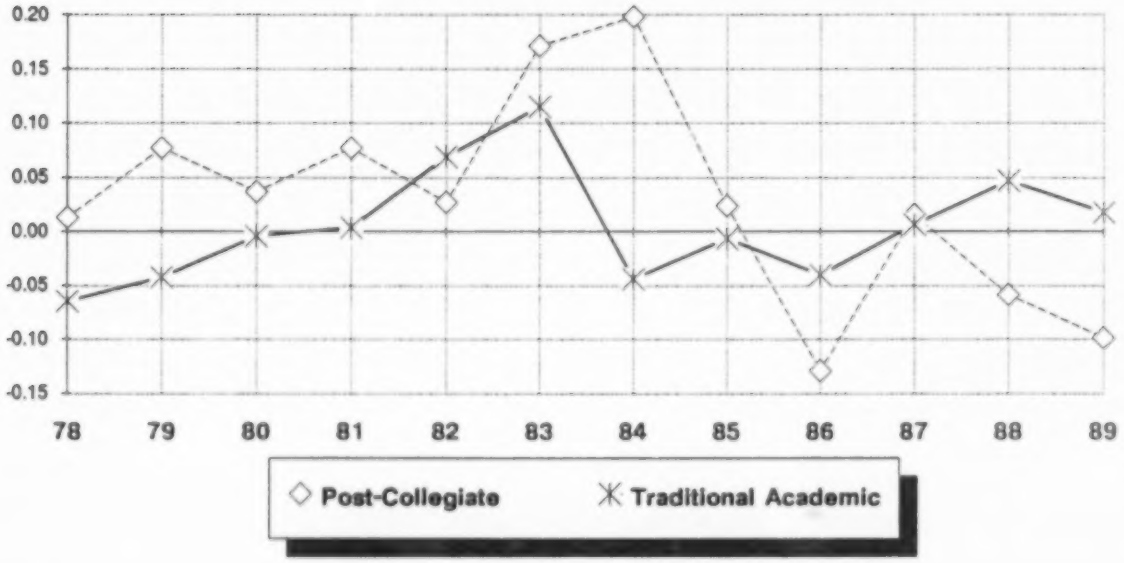


FIGURE 2. RECOGNIZED AUTHORITY AND CREATIVE STYLES OVER TWELVE YEARS

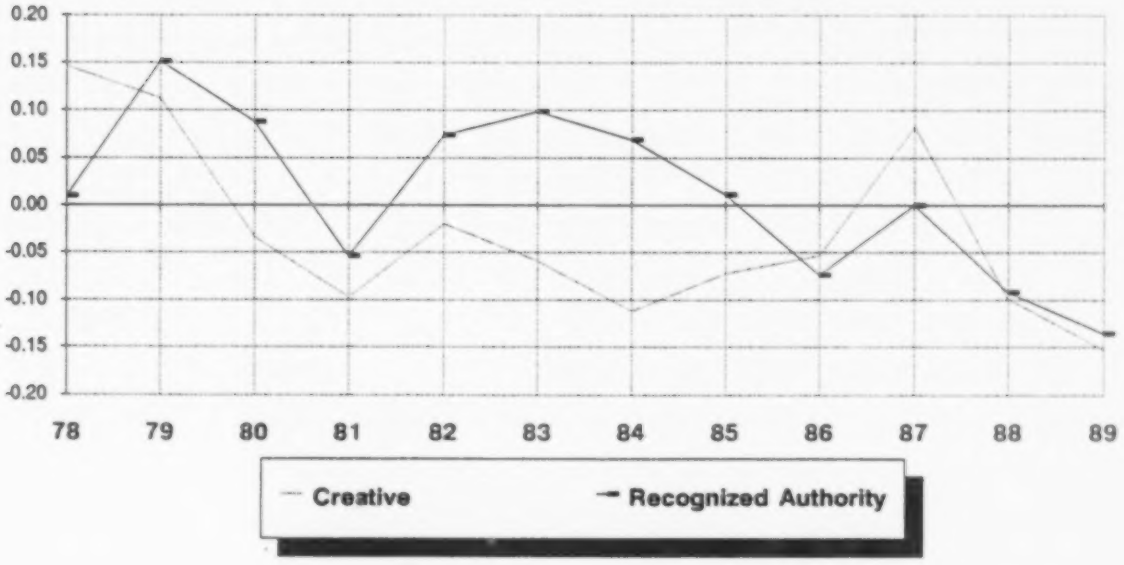
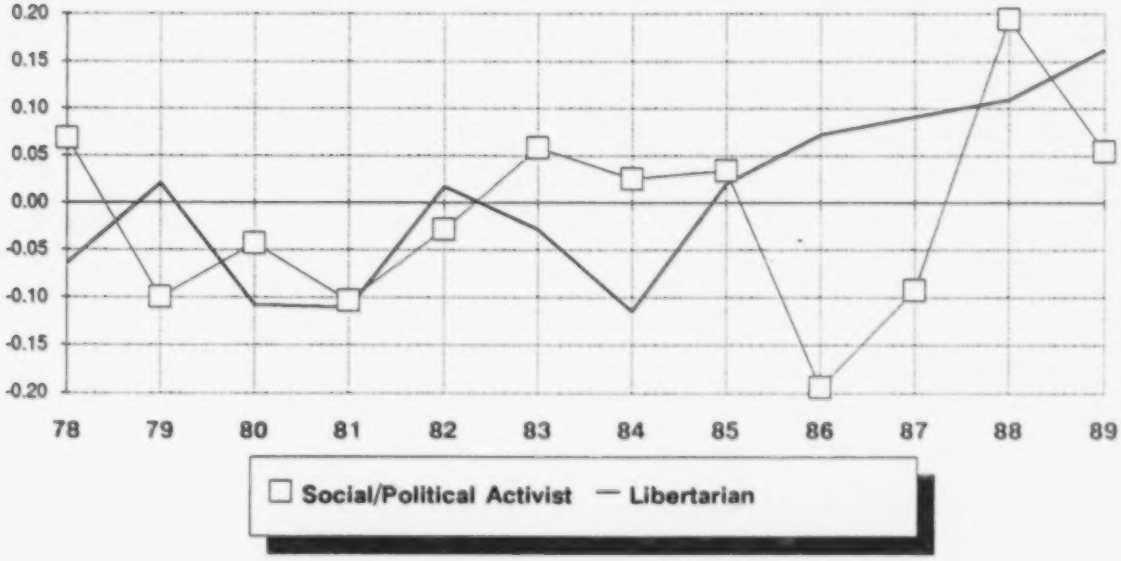


FIGURE 3. SOCIAL/POLITICAL ACTIVIST AND LIBERTARIAN STYLES OVER TWELVE YEARS



Appendix A.

Notes on Carleton College

Carleton College is a four-year, residential liberal arts, coeducational college, located in a small town about 40 miles south of Minneapolis and Saint Paul. The college, which was founded in 1866 is nondenominational. About 1850 students are enrolled each fall. For the fall of 1989, there were over 3,000 applications, and 40% were offerred admission. Those offers produced 471 new students for a yield rate of 39%. The median verbal SAT score for that group was 640, while the median mathematics SAT was 670. Over 46% of those new students came from the top 5% of their high school class.

The student body has considerable geographic diversity, with nearly 75% of its students coming from outside of Minnesota: 9% from Illinois, 7% from New York, 7% from California, 5% from Massaschusetts, 4% from Ohio, 3% from Wisconsin, and about 2% each from Colorado, Oregon, and Michigan. Nearly every state in the union is represented. A few students are citizens of foreign countries (less than 1%).

With a 1990-91 comprehensive fee of $18,250, Carleton is among the more expensive colleges in the country. However, about 57% of its students have received need based financial aid (work, grant and loans) in recent years. According to the estimated parental income data provided by entering students, about a third come from families earning less than $50,000 per year and nearly 60% fall below the $75,000 level.

While in academic terms Carleton students are among the better prepared, they provide a broad geographic and socio-economic representation. We should add that minority representation in the student body is about 13% percent.

APPENDIX B. FACTOR ANALYSIS OF REASONS FOR ATTENDING COLLEGE, FUTURE GOALS, AND SOCIAL/POLITICAL VIEWS

Reasons, Goals, & Views	FACTOR 1 Soc/political activist	FACTOR 2 Post-collegiate	FACTOR 3 Libertarian	FACTOR 4 Creative	FACTOR 5 Authoritative	FACTOR 6 Traditional
Influence social values	.65543					
Participate in community action	.63155					.21189
Promote racial understanding	.59241					.20758
Influence polical structure	.57529				.25371	
Help others in difficulty	.51286					
Develope a meaningful philosophy of life	.33048			.25232		.20681
Make more money		.75789				
Be well off financially		.73070			.21072	
Get a better job		.50985				.23873
Be successful in own business		.48738				
Have administrative responsibility		.45735			.21110	
Abolish capital punishment	.26986	-.29963				
Legalize abortion			.61893			
Live together before marriage			.59804			
Prohibit homosexual relations			-.48876			
Legalize marijuana			.42043			
Married women best at home			-.28072			
Gov not controlling pollution			.27776			
Busing OK to achieve balance			.27017			
Gov not protecting consumer			.27017			
Create artistic work				.63706		
Write original works				.60142		
Achieve in performing art				.38979		
Be an authority in own field					.69605	
Obtain recognition from colleagues		.23984			.61178	
Prepare for grad/prof school		.24640			.27856	.22331
Become a more cultured person						.44047
Gain general education						.43775
Learn more about things						.41379
Improve reading/study skills						.34028